

# Waste Management Project

R. T. Wilde, Vice President/(509) 373-0402



Completed 37 shipments  
of Transuranic Waste to  
the Waste Isolation Pilot  
Plant



Decommissioned  
all 57 Groundwater  
Wells planned in  
FY 2003

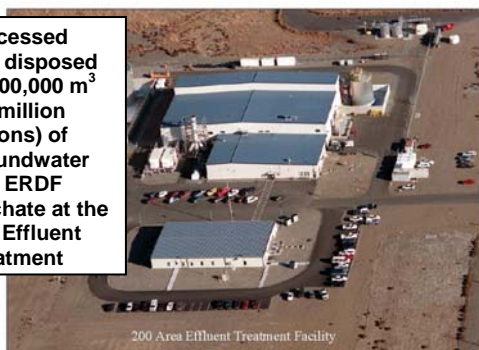


Greater than 1,000 m<sup>3</sup> of 183-H  
waste disposed at the  
Environmental Restoration  
Disposal Facility (ERDF)



## A Year of Progress

Processed  
and disposed  
of 100,000 m<sup>3</sup>  
(27 million  
gallons) of  
groundwater  
and ERDF  
leachate at the  
200 Effluent  
Treatment



200 Area Effluent Treatment Facility



Accelerated  
Processing Units  
installed and  
operational to  
support further  
Transuranic  
Program  
acceleration

RL approval of T Plant readiness  
to receive K Basin sludge



Processed and disposed of 150,000  
m<sup>3</sup> (40 million gallons) of industrial  
waste water at the 300 Treated  
Effluent Disposal Facility



And all accomplished  
by working **SAFE**

## INTRODUCTION

The Waste Management (WM) Project consists of Project Baseline Summary (PBS) RL-CP02, *200 Area Materials and Waste Management*, except for the Environmental Restoration Disposal Facility (ERDF), which is work scope managed by another Site contractor. Also included in this report are PBSs RL-RS01, *South Hanford Industrial Area*; RL-SC01, *Near Term Stewardship*; RL-SS03, *Groundwater Management and Monitoring*; and RL-SS04, *Groundwater Vadose Zone Integration*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of September 2003.

## TOP FY 2003 ACCOMPLISHMENTS

**Transuranic (TRU) Waste Program:** Completed 37 shipments to the Waste Isolation Pilot Plant (WIPP), totaling 238 cubic meters ( $m^3$ ), versus 78  $m^3$  planned for FY 2003; this is 305% of the plan. The non-destructive assay and non-destructive examination Accelerated Process Line (APL) Units were installed, certified and are operational. FH established the ability to send Head Space Gas (HSG) Sampling SUMMA canisters to the Idaho National Environmental and Engineering Laboratory for analysis. FH completed characterization efforts for Plutonium Finishing Plant mixed-oxide Lot #1 (195 pipe-overpack containers).

**Mixed Low Level Waste (MLLW) Treatment:** Completed shipments totaling 953  $m^3$  of 183-H Basin waste to the ERDF, versus a planned 750  $m^3$ ; this is 127% of the plan. This waste stream represents approximately 60% (3,730  $m^3$  or 12,300 containers) of currently stored MLLW at the Central Waste Complex (CWC). A total of 1,788  $m^3$  of MLLW was treated and disposed of in FY 2003, versus a planned 930  $m^3$ ; this is 192% of the plan.

**Liquid Waste Processing:** The 200 Area Effluent Treatment Facility (ETF) treated 27 million gallons of Operable Unit UP-1 groundwater and ERDF leachate. The 300 Area Treated Effluent Disposal Facility treated and disposed of 40 million gallons of industrial wastewater, supporting clean-out of several 300 Area facilities. Operation of the 242-A Evaporator transitioned to CH2M Hill Hanford Group, Inc. on May 26, 2003.

**Groundwater Project:** Issued the Hanford Groundwater Management Plan in March 2003. WM decommissioned 100% of the 57 planned groundwater wells to prevent contaminants from migrating through the vadose zone to Hanford groundwater. WM installed 11 groundwater wells to monitor groundwater for contamination. WM continued operations of pump and treat systems at 99% efficiency to extract contaminants and return clean water to the environment.

## NOTABLE SEPTEMBER ACCOMPLISHMENTS

**TRU Waste Program:** Completed eight shipments to WIPP in September. The non-destructive assay and non-destructive examination APL units completed certification, and are now in operation. The APL HSG unit arrived in September.

**MLLW Treatment:** Completed shipments totaling 333  $m^3$  of 183-H Basin waste to the ERDF in September, versus a planned 250  $m^3$ . A total of 313  $m^3$  of MLLW was treated and disposed of, versus a planned of 290  $m^3$ .

**Liquid Waste Processing:** The 200 Area Effluent Treatment Facility treated 1.9 million gallons of Operable Unit UP-1 groundwater and ERDF leachate in September. The 300 Area Treated Effluent Disposal

## NOTABLE ACCOMPLISHMENTS, CONTINUED

Facility treated and disposed of 2.8 million gallons of industrial wastewater, supporting cleanout of several 300 Area facilities.

### FY 2003 SCHEDULE/COST PERFORMANCE (\$'000)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
RL-CP02 <b>200 Area Materials &amp; Waste Mgm't</b>	114,419	107,976	107,361	-6,443	-6%	615	1%	114,419
RL-RS01 <b>South Hanford Industrial Area Clean Up</b>	253	227	224	-27	-12%	2	1%	253
RL-SC01 <b>Near Term Stewardship</b>	2,482	2,465	2,126	-17	-1%	339	14%	2,482
RL-SS03 <b>Groundwater Management &amp; Monitoring</b>	21,423	19,447	18,431	-1,976	-10%	1,016	5%	21,423
RL-SS04 <b>Groundwater/Vadose Zone Protection</b>	3,181	3,147	2,948	-35	-1%	199	6%	3,181
<b>Total Waste Management Project</b>	<b>141,759</b>	<b>133,261</b>	<b>131,092</b>	<b>-8,498</b>	<b>-6%</b>	<b>2,170</b>	<b>2%</b>	<b>141,759</b>

**NOTE:** Numbers are rounded to the nearest \$K.

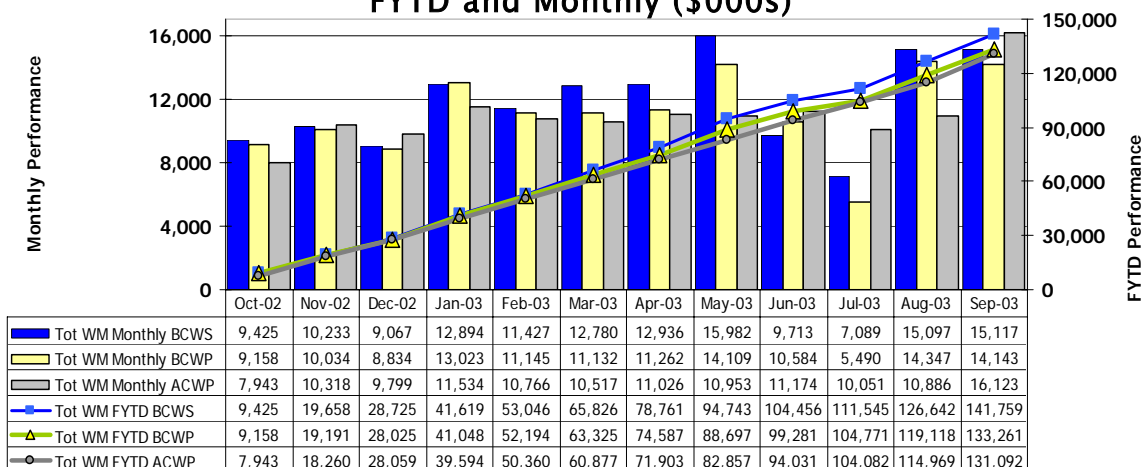
**Schedule Performance:** The PBS CP02 unfavorable (\$-6,443K/-5.6%) schedule variance is primarily the result of the TRU Retrieval Safety Evaluation Report (SER) approval and Drum Vent System (DVS) mobilization delays. The delays are due to Master Documented Safety Analysis technical issues for the SER and lack of competitive bidders for the DVS. The SER was approved in late June, and the DVS mobilization occurred in late August. The receipt of the K Basin sludge is behind due to delays in preparation of the readiness assessment; fuel removal has been delayed to accommodate sludge receipt. Delays in T Plant legacy waste cleanup and the fan repair have occurred. The shallow trench development has been deferred to FY 2004 due to no Record of Decision/Environmental Impact Statement decision. Also the CWC fire deficiency upgrades and the purchase of forklifts are behind due to finalization of work scope.

The PBS SS03 unfavorable variance (\$1,976K/-9.2%) is the result of the long-term monitoring Modutank and ETF upgrades, which are awaiting approval of the Purge Water Investigation-Derived Waste Strategy. The 100-NR-2 Technology Evaluation, apatitie and phytoremediation studies were deferred pending outcome of the August DOE workshop on treatment options. Drilling of the 200-ZP-1 borehole at the Z-9 crib was delayed due to the known presence of plutonium contamination in the soil; drilling cannot commence until the drilling enclosure becomes available. The contract award for the well decommissioning contracts has also been delayed.

**Cost Performance:** The PBS SS03 favorable (\$1,016K/5.2%) cost variance is primarily the result of cost efficiencies achieved throughout the project, where activities have required less labor, materials, sample analysis and waste disposal costs. The favorable variance is offset by unfavorable variance for the 200-PW-2 Remedial Investigation incurring additional analytical costs resulting from more highly contaminated samples than expected, and in the 200-CW-1/200-TW-1 requiring more document preparation support.

## FY 2003 SCHEDULE/COST PERFORMANCE, CONT'D

### Performance Analysis FYTD and Monthly (\$000s)



## MILESTONE ACHIEVEMENT

Number	Milestone Title	Type	Due Date	Forecast Date	Status/Comment
M-15-39A	Complete Chemical Sewer Group Field Work Through Sample Collection and Analysis	TPA	9/30/2003	9/30/2003	Complete 9/30/03
TRP-03-403	Optimization Plan for the Closure of the Central Plateau	RL	9/30/2003	9/30/2003	Complete 9/30/03
M-13-00N	Submit 1 200 NPL RI/FS (RFI/CMS) Work Plan	TPA	12/31/2003		On Schedule
M-24-000	Install RCRA Groundwater Monitor Wells at Rate of up to 50 in CY 2003, if required	TPA	12/31/2003		On Schedule
M-13-00N	Submit 1 200 NPL RI/FS (RFI/EMS) work plan for the 200-UR-1, unplanned releases	TPA	12/31/2003	6/30/2004	TPA change package has been drafted and submitted to RL. Responding to RL comments.
M-91-22	T Plant ready to rec. Canister & fuel wash sludge from K Basin	TPA	2/29/2004	2/29/2004	Letter to RL drafted recommending milestone deletion
M-26-07A	Submit Evaluation of Status of Development of Tritium Treatment Technology	TPA	3/31/2004	3/31/2004	On schedule
M-26-01N	Submit Annual Hanford LDR Report	TPA	4/30/2004	4/30/2004	On schedule
M-91-07	Complete W-113 for Post 1970 CH TRU / TRUM Retrieval	TPA	9/30/2004	TBD	TPA renegotiation ongoing
M-016-66	Initiate Intermediate Design and Authorization Safety Analysis for Remedial Actions at the 618-10 and 618-11 Burial Grounds	TPA	9/30/2004		On Schedule
M-91-12A	Treat 240 Cubic Meters by 12/31/2004	TPA	12/31/2004	TBD	Letter of completion submitted to RL (treatment equivalency)

## FY 2003 FH FUNDS VS. FORECAST (\$000)

	Funding Received	Actual Cost	Variance
<b>RL-CP02</b> Waste Management			
<b>Project Completion - Operating</b>	\$ 114,527	\$ 107,361	\$ 7,166
<b>RL-RS01</b> South Hanford Industrial Area	\$ 238	\$ 224	\$ 14
<b>RL-SC01</b> Near Term Stewardship	\$ 2,128	\$ 2,126	\$ 2
<b>RL-SS03</b> Groundwater Management & Monitoring	\$ 19,707	\$ 18,431	\$ 1,276
<b>RL-SS04</b> Groundwater Vadose Zone Integration	\$ 3,069	\$ 2,948	\$ 121
<b>Post 2006 - Operating</b>	\$ 25,142	\$ 23,730	\$ 1,413
<b>Total</b>	<b>\$ 139,669</b>	<b>\$ 131,092</b>	<b>\$ 8,577</b>

## ISSUES

**Performance Incentive (PI) Negotiations for Groundwater Protection Program:** Groundwater Protection Program PI milestones need to be finalized. DOE-HQ has approved an RL version that does not meet the contractual terms for annual fee earnings. RL has prepared two alternative versions of the PI to discuss with DOE-HQ. The expected resolution date is October 24, 2003.

**Receipt of Administrative Order on Washington Hazardous Waste Management Act and Dangerous Waste Regulation:** Negotiations continue between DOE and the Ecology on a proposed change package and Settlement Agreement. The negotiation includes suspect TRU retrieval milestones that will be difficult to meet and fundamentally changes the current planning basis for retrieval. An agreement was not reached by the target date of October 1, 2003; therefore, the terms of the Order could be enforced (with the exception of II.C.ii, which the regulators indicate will continue to be stayed). RL has stated that agreement has been reached on the technical content of the change package by both agencies, but that the Settlement Agreement is currently undergoing a final review by the Department of Justice. Until negotiations are concluded, the Terms of the Order remain in effect and are difficult, if not impossible, to meet based upon current and planned waste retrieval, designation, treatment and certification capabilities for MLLW and TRU waste. Significant impacts include the need for additional funding above the current baseline to execute new work scope, and the risk of being subject to enforcement by the Ecology if the terms are not met.